AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus comprising:

a plurality of transmission circuits to transmit data over a backplane via one or more of a set of output lines;

a plurality of receiving circuits to receive bits over one or more of a set of ~~output~~ input lines; and

a plurality of parallel-serial conversion circuits coupled to the plurality of transmission circuits and to the plurality of receiving circuits, each of the plurality of conversion circuits being operable to:

convert a parallel signal to multiple serial signals including the received bits, thereby allowing the backplane to be less complex, and send the converted multiple serial signals to one or more corresponding transmission circuits, and

receive one or more sets of serial signals from one or more of the receiving circuits and convert the serial signals to parallel signals,

wherein:

~~stuffing data is added to the received bits in the multiple serial signals such that the number of the multiple~~

~~serial signals multiplied by the second bit rate is equal to the first bit rate,~~

at least one of the plurality of parallel-serial conversion circuits receives SONET/SDH framed data at a first bit rate as a parallel signal and converts the parallel ~~signals~~ signal to multiple serial signals at a second bit rate, where the first bit rate is different than the second bit rate,

stuffing data is added to the received bits in the multiple serial signals such that the number of the multiple serial signals multiplied by the first bit rate is equal to the second bit rate, and

the corresponding transmission circuit transmits the multiple serial signals at the second bit rate over the backplane.

2. (previously presented) The apparatus of claim 1 further comprising a control circuit coupled to the plurality of transmission circuits, to the plurality of receiving circuits and to the plurality of parallel-serial conversion circuits, the control circuit to control conversion of signals between parallel and serial formats and to control transmission and receiving of data.

3. (previously presented) The apparatus of claim 1, wherein at least one of the plurality of parallel-serial conversion circuits receives SONET/SDH framed data at a first bit rate as a parallel signal and converts the parallel signal to a corresponding serial signal at the first bit rate.

4. (previously presented) The apparatus of claim 3, wherein one of the plurality of transmission circuits transmits the converted serial signal at the first bit rate.

Claims 5-6 (canceled)

7. (previously presented) The apparatus of claim 1, wherein at least one of the plurality of parallel-serial conversion circuits receives a serial signal at a first bit rate and converts the serial signal to a parallel SONET/SDH framed data at the first bit rate.

8. (previously presented) The apparatus of claim 7, wherein one of the plurality of receiving circuits receives the serial signal at the first bit rate and sends the serial signal to the parallel-serial conversion circuit.

9. (previously presented) The apparatus of claim 1, wherein one of the plurality of parallel-serial conversion circuits receives multiple serial signals at a first bit rate and converts the serial signals to parallel SONET/SDH framed data at a second bit rate, where the second bit rate is greater than the first bit rate.

10. (previously presented) The apparatus of claim 9, wherein one of the receive circuits receives the multiple serial signals at the first bit rate.

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11. (currently amended) A method comprising:

receiving bits in a parallel signal at a first bit rate;

converting the parallel signal into multiple serial signals; and

transmitting the multiple serial signals including the received bits over a backplane at a second bit rate, the second bit rate being different than the first bit rate,

wherein stuffing data is added to the received bits in the multiple serial signals such that the number of the multiple serial signals multiplied by the ~~second~~ first bit rate is equal to the ~~first~~ second bit rate, ~~and~~

wherein the bits are received as SONET/SDH framed data in the parallel signal, and

wherein the converting of the parallel signal into the multiple serial signals allows the backplane to be less complex.

Claims 12-13 (canceled)

14. (previously presented) The method of claim 11 further comprising transmitting the multiple serial signals at the second bit rate using both a first transmitting circuit and a second transmitting circuit.

15. (currently amended) A method comprising:

receiving bits in multiple serial signals at a first bit rate from a backplane;

converting the multiple serial signals to a parallel signal;

transmitting the parallel signal including the received bits at a second bit rate, wherein the ~~second~~ first bit rate is greater than the ~~first~~ second bit rate,

wherein stuffing data is removed from at least one of the multiple serial signals during conversion such that the number

of the multiple serial signals multiplied by the ~~first~~ second bit rate is equal to the ~~second~~ first bit rate, ~~and~~

wherein the bits are SONET/SDH framed data in the parallel signal, and

wherein the receiving of bits in serial signals allows the backplane to be less complex.

Claims 16-17 (canceled)

18. (previously presented) The method of claim 15 further comprising receiving the multiple serial signals at the first bit rate using both a first receiving circuit and a second receiving circuit.

19. (currently amended) An apparatus comprising:

means for receiving bits of a parallel signal at a first bit rate;

means for converting the parallel signal into multiple serial signals; and

means for transmitting the multiple serial signals including the received bits at a second bit rate over a backplane, the second bit rate being different than the first bit rate,

wherein stuffing data is added to the received bits in the multiple serial signals such that the number of the multiple serial signals multiplied by the ~~second~~ first bit rate is equal to the ~~first~~ second bit rate, ~~and~~

wherein the bits are received as SONET/SDH framed data in the parallel signal, and

wherein the converting of the parallel signal into the multiple serial signals allows the backplane to be less complex.

Claims 20-21 (canceled)

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22. (previously presented) The method of claim 19 further comprising means for transmitting the serial signals at the second bit rate using both a first transmitting circuit and a second transmitting circuit.

23. (currently amended) An apparatus comprising:

means for receiving bits in multiple serial signals at a first bit rate from a backplane;

means for converting the multiple serial signals to a parallel signal;

means for transmitting the parallel signal including the received bits at a second bit rate, wherein the second bit rate is greater than the first bit rate,

wherein stuffing data is removed from at least one of the multiple serial signals during conversion such that the number of the multiple serial signals multiplied by the ~~first~~ second bit rate is equal to the ~~second~~ first bit rate, ~~and~~

wherein the received bits are transmitted as SONET/SDH framed data in the parallel signal, and

wherein the receiving of bits in serial signals allows the backplane to be less complex.

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Claims 24-25 (canceled)

26. (previously presented) The apparatus of claim 23 further comprising receiving the multiple serial signals at the first bit rate using both a first receiving circuit and a second receiving circuit.

27. (previously presented) The apparatus of claim 1, wherein

the first bit rate corresponds to an STS-48 line rate,

the second bit rate corresponds to an STS-12 line rate, and

the number of transmitted serial signals is four.

28. (previously presented) The apparatus of claim 11, wherein

the first bit rate corresponds to an STS-48 line rate,

the second bit rate corresponds to an STS-12 line rate, and

the number of transmitted serial signals is four.

29. (previously presented) The apparatus of claim 15, wherein

the first bit rate corresponds to an STS-12 line rate,

the second bit rate corresponds to an STS-48 line rate, and

the number of received serial signals is four.

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30. (previously presented) The apparatus of claim 19, wherein

the first bit rate corresponds to an STS-48 line rate,

the second bit rate corresponds to an STS-12 line rate, and

the number of transmitted serial signals is four.

31. (previously presented) The apparatus of claim 15, wherein

the first bit rate corresponds to an STS-12 line rate,

the second bit rate corresponds to an STS-48 line rate, and the number of received serial signals is four.

32. (new) The apparatus of claim 1, further comprising:

an interface to the backplane, wherein the backplane interface has a footprint whose size is configured for serial signals.

33. (new) The method of claim 11, further comprising:

transmitting the multiple serials signals over the backplane via a footprint whose size is configured for serial signals.

34. (new) The method of claim 15, further comprising:

receiving the multiple serial signals from the backplane via a footprint whose size is configured for serial signals.

35. (new) The apparatus of claim 19, further comprising:

an interface to the backplane, wherein the backplane interface has a footprint whose size is configured for serial signals.

36. (new) The apparatus of claim 23, further comprising:

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an interface to the backplane, wherein the backplane interface has a footprint whose size is configured for serial signals.